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| 10/772,526      | 02/05/2004  | N.R. Gandhi          | 5333                | 5398             |

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EXAMINER

CHAWLA, JYOTI

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1761

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/772,526

Applicant(s)

GANDHI ET AL.

Examiner

Jyoti Chawla

Art Unit

1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 18-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/19/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election of Group I (Claims 1-17), in the reply filed on July 6, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1-17 are examined in the current application and claims 18-33 have been withdrawn from further consideration according to the latest filing of claims as of July 6, 2006. The requirement for restriction has been made FINAL.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-3, 5, 6 and 11 are indefinite for the use of improper Markush-type language in the recitation of the various elements (i.e. "selected from ... and..."). The claims should recite a group of elements using accepted U.S. Patent language:

- (a) [open set]: "the ingredient **comprises** A, B, C, **or** D."
- (b) [closed set]: "the ingredient is selected from the group **consisting of** A, B, C **and** D."

Claims 1, 2 and 11-14 recite method for preparing a fermented soy composition and calls for "incorporating at least one of an oil and a fat component and said fermented soy composition". It is unclear whether

- at least one oil is added to a fat before being added to the fermented soy composition.
- either at least one oil or at least one fat is added to the fermented soy composition
- at least one oil and at least one fat are added to fermented soy composition

Claim 3 further recites "at least one of a food grade acid and a salt of said acid". It is unclear whether "at least one" refers to

- at least one food grade acid or its salt
- at least one food grade acid and at least one acid salt

Claims 5 and 6 further recite "fermented soy composition is heated for at least one of a time and a temperature sufficient to substantially". It is unclear whether "at least one" refers to

- either time or temperature
- at least one time and at least one temperature

Clarification and/or correction is required.

Claim 16 recites "a fat component sufficient to provide a sour cream", however does not give a range or percentage specifying the amount of fat that would qualify as a soy based sour cream composition. Clarification and /or correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-12 and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Marshall et al. (US 4,678,673).

Marshall et al, hereinafter Marshall, discloses soy based fermented imitation dairy products with sufficient added fat to make a fermented creamy product, i.e., soy sour cream.

Regarding claims 1 and 2, Marshall discloses that fermentation of soymilk (aqueous soy composition) to make soy sour cream and yogurt has been known (column 1, lines 9-39). Marshall teaches use of lactobacillus species, i.e., thermophilic bacteria to ferment soymilk to produce a fermented product with buttery dairy like flavor with some tartness, i.e., sour cream flavor (Column 2, lines 18-31 and Column 7, lines 1-5). Marshall further teaches heat treatment of the fermented product to inactivate bacteria (Column 5, lines 21-24) as recited by the applicant.

Regarding claim 4, Marshall teaches incorporation of a fat component to the soy composition (Column 2, line 60 to Column 3, line 8) and the composition is homogenized at a pressure of 2100 psi (Column 6, lines 41-44), which falls in the recited range of the applicant (i.e., greater than about 2,000 psi).

Regarding claims 5 and 6, Marshall teaches heating of the fermented soy composition for a time and a temperature sufficient to substantially discontinue fermentation and make the composition aseptic (Column 5, lines 21-25) as recited by the applicant.

Regarding claim 7, Marshall teaches treating fermented soy composition at a pressure greater than about 2000 psi (Column 6, lines 41-44), as discussed regarding claim 4.

Regarding claim 8, Marshall teaches dehydration of said fermented soy composition (Column 2, line 56 and Column 5, lines 21-35).

Regarding claim 9, Marshall teaches spray dried fermented soy product (Column 5, lines 21-35 and 58-62) as recited by the applicant.

Regarding claim 10, Marshall teaches addition of water to reconstitute said dehydrated soy composition (Column 6, lines 31-45) as recited by the applicant.

Regarding claim 11, Marshall teaches a process for preparing a sour cream product using an aqueous soy composition and fermenting it with at least one thermophilic bacterial culture (*Lactobacillus* species) and further incorporating at least one of an oil and a fat component and said fermented soy composition, homogenizing to stabilize the composition; and heating to provide a substantially aseptic sour cream product. See discussion above regarding claims 1, 2, 4-6.

Regarding claim 12, Marshall teaches addition of coconut oil and soy oil, i.e., vegetable oil and fat, (Column 3, lines 6, 17-18 and column 6, lines 30-38) as discussed above regarding claim 4.

Regarding claim 14, Marshall teaches addition of a food grade acid to adjust the pH of the fermented soy composition (Column 3, lines 18-22) as recited by the applicant.

Regarding claim 15, Marshall teaches a method of using thermophilic bacterial culture to prepare a acidified soy composition with or without an animal sugar by fermenting an

aqueous soy composition for a time and at a temperature sufficient to acidify it (Column 2, lines 18-49; Column 3, lines 25- 37 and Column 4).

Regarding claim 16, Marshall teaches a fermented soy composition with a fat component between 10-40% and Table I, shows proximate analysis of dried soy product with a fat content of 24.6 %, both are sufficient to provide a sour cream (Column 2, lines 65 to Column 3, line 8; Column 4, lines 15-28 table) as recited by the applicant.

Regarding claim 17, Marshall teaches dehydrating the fermented soy composition (Column 2, line 56 and Column 5, lines 21-35) as discussed above regarding claim 8.

Naming a high fat fermented soy based product "soy sour cream" does not involve an inventive step, and does not provide patentable distinction to the claims. Thus, the claimed invention is anticipated by the reference even though the reference does not call it a sour cream, absent any clear and convincing evidence and/or arguments to the contrary.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Determining the scope and contents of the prior art.  
Ascertaining the differences between the prior art and the claims at issue.  
Resolving the level of ordinary skill in the pertinent art.  
Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall as applied to claims 1,2,4-12 and 14-17 above, and further in view of Tsumura et al (US 3857970).

Regarding claim 3, Marshall teaches that aqueous soy composition comprises water, a ground soybean that has been made into a slurry (column 3, lines 55-60 and column 6, line 62) whole soybean particulate and at least one of a food grade acid and a salt of said acid (Column 3, lines 10-25). Marshall does not specifically teach using dry whole soybean particulate to make the soymilk as recited in claim 3. Tsumura et al, hereinafter Tsumura, teaches making of cheese product based on soy, by fermenting the aqueous soy composition. Tsumura further teaches that one of the ways of obtaining soymilk would be by dissolving or dispersing soy flour in water (Column 2, lines 25-27). Also see Columns 1-3. It is possible to make an emulsion of soy in water, i.e., soymilk, by various soy based products like the soy flour, soy protein isolate or soaked whole soybean slurry (Tsumura, Column 2). Therefore, it would have been obvious to the one with ordinary skill in the art to modify Marshall based on the teachings of Tsumura, and use a dry soy product to make soy milk in place of soaking the beans and making slurry, to expedite the process of making the final fermented soy product. One of ordinary skill



in the art would have been motivated to do so to save time as making soymilk from powder is faster and economical than soaking the beans to make the slurry. Also see MPEP 2144.06, about substituting equivalents known for the same purpose.

Regarding claim 13, Marshall teaches fermenting soymilk composition with Lactobacillus as discussed in claims 1, 11 and 15 above, however Marshall does not teach the thermophilic bacterial culture with at least one Lactobacillus strain and at least one Streptococcus strain as recited by the applicant. Starter culture of thermophilic or heat tolerant bacteria such as Streptococcus and Lactobacillus to ferment soymilk has been known and Tsumura teaches fermentation of soymilk using Lactobacillus strain and one Streptococcus strain (Column 4, lines 24-30). One of ordinary skill in the art would have been motivated to modify Marshall and use a combination of Lactobacillus and Streptococcus because the combination has good ability for formation of diacetyl and acetoin (indicators of fermentation), which would make the fermented soy based dairy like product with good flavor in a shorter fermentation time.

#### ***Remarks/ Conclusion***

The prior art made of record as part of USPTO form 892 contains references that have not been relied upon in this office action but are considered pertinent to applicant's disclosure.

Tatter et al (US 3433643) teach acid flavored vegetable based dehydrated sour cream composition having a soy component and added fats. The fermentation is done using Streptococcus and Lactobacillus.

Osaka et al (US 3937843) teaches bean odor free fermented soy product by using culture of Streptococcus and Lactobacillus.

Hashimoto et al (JP 01-148176) teaches cheese spread by fermenting soy using a culture of Streptococcus and Lactobacillus.


Boufassa et al (US 2003/0031756 A1) teaches method of making fermented soymilk products with thermophilic, lactic acid bacteria.

Gandhi et al (US 6322846 B1) teaches a soymilk composition and methods of making it.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Chawla whose telephone number is (571) 272-8212. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jyoti Chawla  
Examiner  
Art Unit 1761

  
**KEITH HENDRICKS**  
**PRIMARY EXAMINER**